

Bruce Phillips (Aclara) Talking Points
associated with WCPSC Conference Smart Grid Panel discussion:
"What Regulatory Policies are Necessary to Ensure Cost Effectiveness"
June 9, 2009 in Hawaii

- A definition is needed as to what the “SmartGrid” is to be and let technology and the utilities take us there.
- Overall our electric grids do not achieve the benefits and efficiencies offered by available proven technology and can be significantly improved.
- Some things that appear certain:
 - A robust, reliable and fast “communication infrastructure” is required as the critical foundational framework. This is called AMI today.
 - The “smart meter” is a critical part of the SmartGrid – however only a part.
 - Automation in the distribution network such as capacitor switching, line switching, voltage monitoring and balancing, etc.
 - The SmartGrid is a part of the broader reliable energy agenda.
 - Demand Response is a key component
 - Outage, intelligent fault detection, on-line monitored equipment for preventative maintenance, non-technical loss detection are all critical parts
- The SmartGrid will be a blend of a number of technology solutions working well together via open standards interfaces.
- Regulatory Policies to support and enable a cost effective SmartGrid must include:
 - A level playing field for technology solutions not constrained by political agendas
 - Establish the requirements and the expectations – not the technical methods to achieve these
 - Utilities make the decisions on which technologies or blends will meet their particular topological and service needs
 - Require “open standards” at the appropriate interface points and insure security of the systems
 - Incentivize robust technologies vetted in the real world with reliability and scalability that is proven and established
- Regulatory Policies must:
 - Incentivize the utilities to move in the direction of the SmartGrid and energy efficiency
 - Possibly re-tool or modify current utility cost recovery processes to incentivize the desired outcome
 - Incentivize technological innovation and development however coupled with appropriate expectations to performance and reliability

- Do not penalize the early adaptors and leaders willing to take educated risks with technology
 - Take great caution as to futuristic expectations and requirements that are not founded in economic thinking and reality based
 - Accept that we have an educated and knowledgeable society and provide the consumer with choices and incentives to do the right thing
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- State Commissioners and FERC Commissioners must work together closely today and in the future
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- Do not let the limitations of the Federal Stimulus Programs to be a SmartGrid limitation and to define the extent of the progress. While the SmartGrid Stimulus has significantly catalyzed discussion and study, it has halted progress thus far.
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- There is an array of technologies available today - proven and economically viable at various levels
 - Power Line based
 - PLC – Power Line Carrier
 - PLS – Power Line Systems (different than PLS)
 - BPL – Broadband over powerline
 - Radio Frequency Based
 - Drive-by (AMR but not AMI)
 - Licensed fixed network
 - Un-licensed fixed network
 - Mesh
 - Cell Phone Based
 - GPRS

These technologies differ economically, capability in urban and rural environments, topography, and are at various stages of being proven at scale.

So ... what is the SmartGrid? I offer that the SmartGrid is actually ***Intelligent Infrastructure™***. This is available today and technical innovation will continue so that our aspirations of having an ***Intelligent Infrastructure™*** serve our needs is achievable and well within our grasp. We simply need to get on with it!